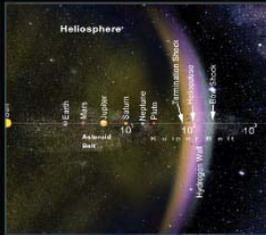
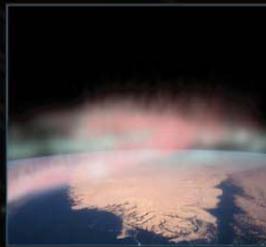


Activities and events since Nice WG meeting



Steering Committee

H. Opgenoorth (Chair)

R. Marsden

ESA

W. Liu (Vice-Chair)

CSA

M. Guhathakurta

D. Sibeck (Exec. Secr.)

G. Withbroe (Sen. Adv.)

NASA

T. Kosugi

ISAS/JAXA

L. Zeleny

RSA





First ILWS Working Group Meeting Nice, April 14-15, 2003

- ❑ **22 Space Organizations and 2 representatives of the G-B Community committed to contribute to ILWS over the next decade**

NASA, ESA, RASA, ISAS, CSA, NOAA, 11 ESA M-S, CRL, Ukraine, Brazil, Hungary, China in addition CAWSES (SCOSTEP- Chair S. Basu) and GB-Task Group (Chair E. Donovan) (not attending: Belgium and India; after the meeting Australia Czech and Slovak Rep. joined WG)

- ❑ **Presentation of National Plans for Missions in the ILWS Realm**
- ❑ **Discussion of Mission Synergies and Potential Coordination**
- ❑ **Three Task Groups established:**
 - **Ionosphere Thermosphere Coupling** (Chair R. Heelis)
 - **Magnetosphere** (Chair H. Koskinen)
 - **Ground-Based Coordination** (Chair E. Donovan)
- ❑ **Future Task Groups discussed**
 - **“Heliosphere”** (now to start after completion of Solar Sentinelsr science definition)
 - **“Model and Theory” plus “End Users”** (– Initiated at Nov SC meeting M. Hesse & E. Daly)





First ILWS Working Group Meeting Nice, April 14-15, 2003

Four Main Areas of Mission Synergies / Collaborations identified

❑ Sun and Heliosphere

- SOHO, SDO, STEREO, Solar-B, CORONAS-Photon, Picard, ...
- Ulysses, Solar Sentinels (incl. B-C), Solar Orbiter, L5, InterhelioProbe, Sub-L1 mission...
- L1-Monitor...

❑ Outer Magnetosphere

- Cluster, MMS, Themis, MagCon, RAVENS (Canada), SWISE (China), SCOPE, ROY...

❑ Inner Magnetosphere

- Radiation Belt Storm Probes, Storms (SF/F), SWISE (China), E^{pop} (Canada)...

❑ Ionosphere-Thermosphere

- Ionosphere Thermosphere Storm Probes, GEC, ...
- SWARM, ACE+, ...



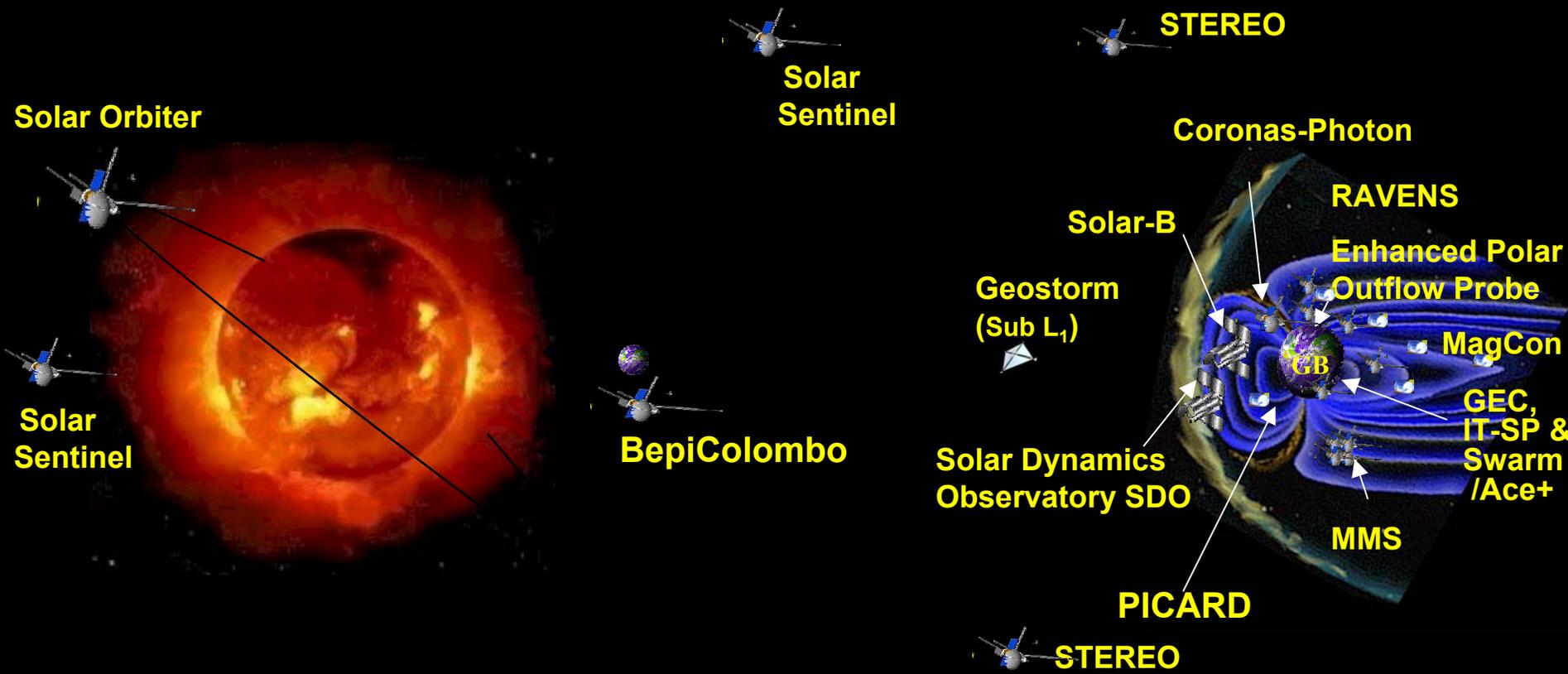
International Living With a Star

Some Candidate Missions



Ulysses

Distributed network of spacecraft providing observations of Sun-Earth system.



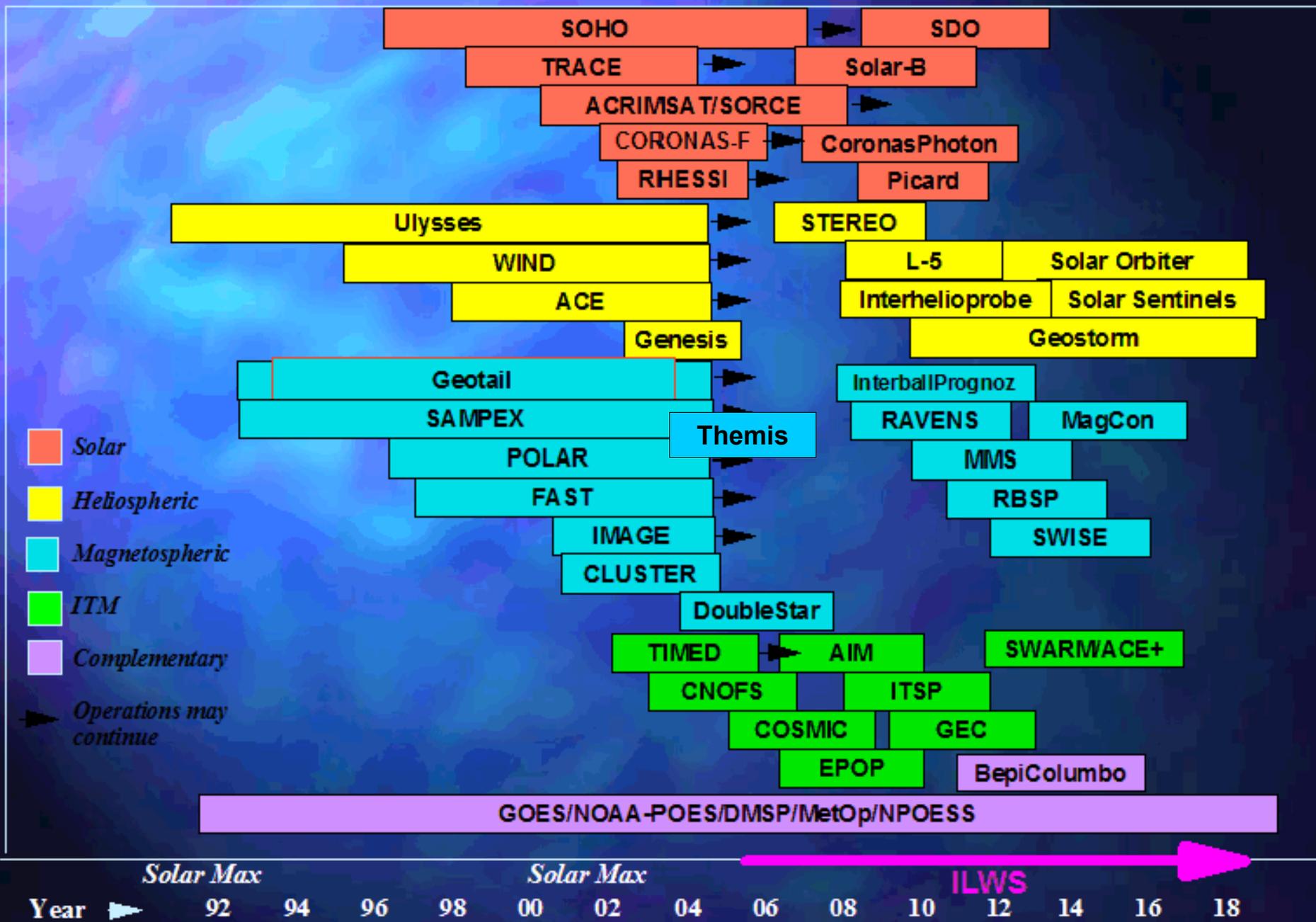
- *Solar-Heliospheric Network* observing Sun & tracking disturbances from Sun to Earth.
- *Geospace Mission Network* with constellations of smallsats in key regions of geospace.



International Living With a Star



Present Solar-Terrestrial Missions & "First Order" ILWS Missions





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ June 2003 Visit to ISSI, Bern - presentation of ILWS, Invitation (R. Bonnet) for series of ISSI ILWS Work-Shops
- ❑ Sept 2003 2nd European ILWS meeting in ESTEC, First Strategy Outcast for ESA / European contributions
- ❑ Autumn 2003 First AO for ILWS by CSA resulting in 2 proposals: Ravens and Orbitals
- ❑ Oct 2003 LWS MOWG meeting at NASA, for the first time including invited European members and observers





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ Oct 2003 Budget problems for NOAA SEC, supportive community effort, support from ILWS expressed
- ❑ Oct/Nov 2003 CCMC meeting and presentation of ILWS, Idea for Model and Theory TG
- ❑ Creation of JAXA (from NASDA and ISAS)
- ❑ Nov 10/11 ESA SPC meeting, recovery of ESA Cosmic Vision Program with Solar Orbiter clinging to the edge of the planning period (confirmation of B/C MPO/MMO, loss of Eddington and B/C lander)
- ❑ Nov 20 2nd ILWS-SC meeting ESTEC
Formation of End User and Model & Theory Task Groups





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ Dec 2003 AGU, US community discussion within GMDT, confirm LWS Geospace missions – no NASA support of SWARM
- ❑ Dec 29, 2003 Launch of TC1 Double Star, successful commissioning, but problems with one boom deployment (STAFF) and Solar Panel Magnetic Pulse (FGM)
- ❑ Jan 2004 3rd European ILWS meeting in London - revised Strategy 3 Main Priorities, and 5 general areas of interest (See ESA talk)
- ❑ Jan 2004 NASA invitation to ESA/Europe to provide Coronagraph for SDO - EUROCOR consortium formed (Italy, France Belgium, Germany)
- ❑ Jan 2004 CSA offers EFI instruments to SWARM (ESA/EOP), support from ESA Science Directorate





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ Feb 2004 SPC meeting, decision on Ulysses extension to 2008, 3rd polar pass and fast latitude passage, PICARD not supported
- ❑ Feb 2004 ISSI decides to host first ILWS WS in early 2005
initial organising committee: G. Haerendel, R. von Steiger, R. Bonnet, G. Paschmann, L. Guhathakurta, and H. Opgenoorth,
...proposed to add W. Liu and D. Sibeck
- ❑ Feb 2004 Presentation and PR Booth at UN/COPUOS Meeting Vienna
- ❑ Feb 2004 Bush Initiative on Exploration – Redefinition of NASA Program
Consequences for SEC, LWS (and ILWS)





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ March 2004 Cluster workshop – large separation delayed on purpose, Planning for 2+2 years extension (aimed at overlap with Themis), 10000-20000 km tetrahedron
- ❑ April 2004 Cancellation of EUROCOR plans following risk assessment
 - option for mission of opportunity remains
 - idea of “SOHO Bonus Mission” (TSI and LASCO) born
- ❑ April 1 – 2 new ESA directorates (Exploration and EU relations) several new directors (e.g. EOP), impact difficult to evaluate
- ❑ March/April 2004 ESA B/C MPO “RFP” and JAXA B/C MMO AO





Activities since Fist ILWS - WG Meeting Nice, April 2003

- ❑ May 2004 ESA Call for Themes and ESA DG Long term plan
- ❑ May 2004 SSWG programmatic discussion, recommendation on technology demonstrator (Smart-3) for M3, poss. In Ring Current
- ❑ May 2004 LWS MOWG ,
- recommendation to turn Geospace missions into PI - Missions
- ❑ May 2004 NASA Solar Sentinels SDT formed
- ❑ May 2004 SWARM: Recommended as First Priority in the ESA / EOP Living Planet Programme





Future ILWS Events

- ☑ May 2004 3rd ILWS S C and 2nd ILWS WG meeting in Banff
- ☐ May 27, 2004 Decision of ESA EOP programme
Final SWARM Selection expected
- ☐ June 2004 ESA-SPC meeting (Solar Orbiter confirmation)
- ☐ June/July 2004 Space Weather Workshop, ESTEC
Including EU-COST Action and ILWS
- ☐ July 2004 ILWS Symposium at COSPAR in Paris
- ☐ July 2004 Double Star TC2 Launch





Future ILWS Events

- ❑ November 2004 SPC meeting,:
Cluster extension, LoR plan for Ministerial Conference in 2005,
(including Smart-3 (Rad-Belts / M3) ?)
Other ESA contributions to ILWS - under discussion Stereo Support
- ❑ Spring 2005 ISSI ILWS workshop
- ❑ Spring 2005 Ministerial Conference on ESA Level of Resources (LoR)
- ❑ Spring 2004 3rd ILWS Working Group Meeting (where ?)





Charter of the ILWS-WG I

ILWS-WG MISSION

Stimulate, strengthen and coordinate space research to understand the governing processes of the connected Sun-Earth system as an integrated entity.

→ simultaneous and coordinated observations

→ at strategic locations in the entire system





Charter of the ILWS-WG II

ILWS-WG Objectives

□ To stimulate and facilitate:

- Study of the Sun Earth connected system and the effects which influence life and society
- Collaboration among potential partners in solar-terrestrial space missions
- Synergistic coordination of international research in solar-terrestrial studies, including all relevant data sources as well as theory and modeling.
- Effective and user driven access to all data, results and value-added products

